32-Bit Expansion

Complete Expansion Units and Components

Features

- Easy installation and configuration
- Plug-n-go operation – no software required
- 7 or 13 slots on a separate backplane
- Supports full length PCI cards
- Ample cooling to keep your PCI cards running cool
- Independent operation of host bus and expansion buses
- Stand-alone mini-tower and rackmount chassis available
- Low latency and high throughput for maximum performance

Limited by the number of PCI slots in your computer?

GE Fanuc Embedded Systems makes it easy and cost effective to add PCI slots so you can expand your computer's functionality by adding more PCI cards. Because our expansion products conform to the PCI to PCI Bridge Architecture Specification, no additional software drivers are required for cards installed in the expansion unit.

Complete expansion systems, in a variety of configurations, and expansion components are available.

For applications requiring 64-bit expansion or chassis separation greater than 4 feet.

Omnispan™ PCI 64-bit expansion systems and components are available for applications requiring 64-bit PCI or CompactPCI expansion or chassis separation greater than 4 feet. Omnispan 64- bit/33 MHz PCI expansion kits provide 7 additional PCI slots to PCI system. Omnispan components provide additional slots for CompactPCI host systems.

Featuring 266 MB/s throughput and low latency, Omnispan provides true real-time performance. Plus, Omnispan supports cable lengths up to 5 meters.

Omnispan is available as a complete kit or as individual components. Available components include:

- Host cards: PCI and CompactPCI
- Backplanes: PCI
- Backplane controller: CompactPCI
- Cables: lengths up to 5 meters

32-Bit Expansion Units and Components

Specifications

Complete Expansion Units

2123A ATX
- 13-slot rackmount
- ATX
- 420W power supply: 5V/3.3V
- Cooling fans: one 116 CFM & one 44 CFM P/S

2131 ATX
- 7-slot mini-tower
- ATX
- 300W power supply: 5V/3.3V
- Two 3.5-inch and two 5-inch expansion bays
- Cooling fans: one 27.5 CFM

2132 ATX
- 7-slot rackmount
- ATX
- 300W power supply: 5V/3.3V
- Cooling fans: two 42. CFM

Host Cards

- Supports cable lengths up to 4' (1.2m)
- Throughput up to 132 MB/s
- 32-bit / 33 MHz
- Draws 0.5A at +5V maximum

200-2 PCI
- Installs in a 32-bit or 64-bit +5V or +3.3V master capable PCI slot

56040-101 PCI *(RoHS)*
- 6/6 RoHS version of the 200-2

201-2 PMC
- PCI card with PMC connectors
- Installs in a 32-bit or 64-bit +5V master capable PMC connector

202-2 CompactPCI
- Installs in a 32-bit or 64-bit +5V master capable cPCI slot

200-2A Remote Power-up PCI
- Used only with Remote Power-up backplane controller card and backplane or rackmount enclosure

Backplane Controller Cards

210-2 PCI
- Use with any 32-bit PCI20x-2 host card and any non-ATX backplane
- Draws 0.5A at +5V maximum

56040-102 PCI *(RoHS)*
- 6/6 RoHS version of the 210-2

212-2 CompactPCI
- Use with any 32-bit PC 20x-2 host card, any standard cPCI backplane, and any cPCI enclosure
- Draws 0.5A at +5V maximum

210-2A Remote Power-up PCI
- Used only with Remote Power-up host card and backplane or rackmount enclosure

Backplanes: ATX

- Single PCI bus
- 32-bit PCI slots support +5V PCI cards

23-530-2 Seven-slot ATX
- Integrated backplane controller functions
- Compatible with any 32-bit 20x-2 host card
- Dimensions (WxD): 11.2 x 7.2 (inches); 28.45 x 18.29 (cm)

24-500-2A Fourteen-slot ATX
- Four PCI buses
- Compatible with Remote Power-up host card and backplane controller
- Dimensions (WxD): 12.35 x 7.75 (inches); 31.37 x 19.69 (cm)

Backplanes: Non-ATX

- Requires 210-2 PCI backplane controller card
- Compatible with any 32-bit 20x-2 host card
- 32-bit PCI slots support +5V PCI cards

23-500-2 Eight-slot Non-ATX
- Two PCI buses
- Dimensions (WxD): 8.6 x 7.2 (inches); 21.84 x 18.29 (cm)

Cable (Round 68-pin)

- Use with all 32-bit expansion products
- 2-foot (.6m): 10-202
- 4-foot (1.2m): 10-204 *(RoHS)*

Enclosures: ATX

- Single PCI bus

240-2-201A 13-slot Rackmount
- Compatible with 200-2A PCI Remote Power-up host card and 210-2A backplane controller card
- 420W power supply with provision for +5V and +3.3V
- Includes 24-500-2A backplane; draws 1.5A at +5V maximum
- Dimensions: 17x6.5x18 (inches); 43.2x16.5x45.7 (cm): Faceplate: 19x7 (inches); 48.26x17.78 (cm)

32-bit System Requirements

PCI Cards Installed In Expansion Unit Slots
- Long or short form factor
- 32/64-bit data and 32/64-bit address capable (all PCI expansion slots operate at 32- bits/33 MHz)
- Comply with PCI Bridge Architecture Specification Rev. 1.2 if applicable
- Comply with PCI Local Bus Specification 2.3

Host Computer
- At least one available PCI slot
- Comply with all PCI bus specifications
- BIOS or boot ROM must recognize up to two levels of PCI bridges for four and seven slot expansion units, and up to three levels for 13-slot units
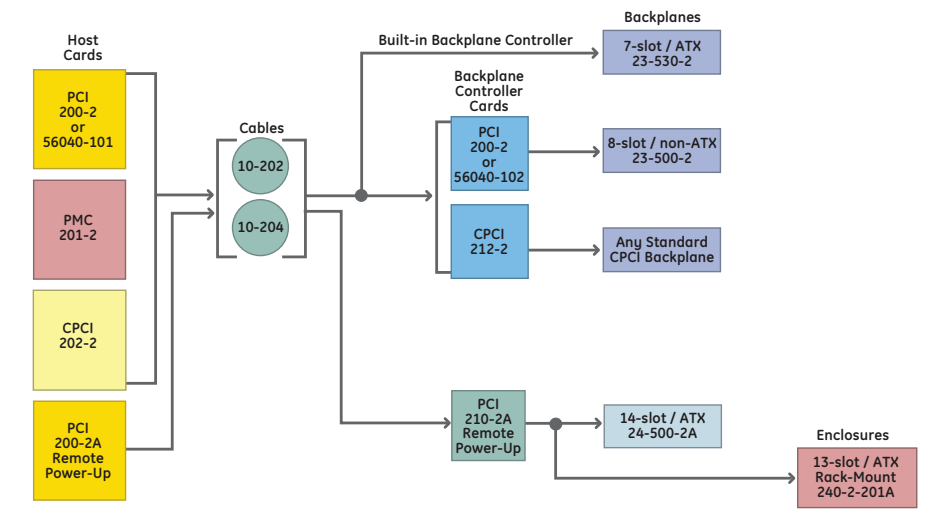
Features Matrix

	Feature	2131 ATX	2132 ATX	2123A ATX
Enclosure	Number of PCI slots	7	7	13
	Enclosure type	Mini-tower	19" rackmount	19" rackmount
	Color	Pearl-white	Black faceplate	Black faceplate
	Cooling fans	1 (27.5 CFM)	2 (42.5 CFM)	1 (116 CFM) 1 (44 CFM)
	Expansion bays	2 (3.5") 2 (5.0")	None	None
	Dimensions: Inches (WxHxD) cm	9.5x14.25x17.25 24.13x36.2x43.82	17x6.5x18* 43.2x16.5x45.7	17x 6.5x18* 43.2x16.5x45.7
BC Card	Backplane controller	Integrated	Integrated	210-2A
Power Supply	Maximum total	300W	300W	420W
	Combined 3.3V & 5V	160W	160W	220W
	+5V maximum	150W	150W	200W
	+3.3V maximum	46.2W	46.2W	99W

* Faceplate: 19 x 7 inches (48.26 x 17.78 cm)

32-Bit Expansion Units and Components

Block Diagram

Host Cards	Cables	Built-in Backplane Controller	Backplanes

Host Cards:
- PCI 200-2 or 56040-101
- PMC 201-2
- CPCI 202-2
- PCI 200-2A Remote Power-Up

Cables:
- 10-202
- 10-204

Built-in Backplane Controller → Backplanes
- 7-slot / ATX 23-530-2

Backplane Controller Cards:
- PCI 200-2 or 56040-102 → 8-slot / non-ATX 23-500-2
- CPCI 212-2 → Any Standard CPCI Backplane

- PCI 210-2A Remote Power-Up → 14-slot / ATX 24-500-2A

Enclosures:
- 13-slot / ATX Rack-Mount 240-2-201A

About GE Fanuc Embedded Systems

GE Fanuc Embedded Systems is a leading global provider of embedded computing solutions for a wide range of industries and applications. Our comprehensive product offering includes many types of I/O, single board computers, high performance signal processors, fully integrated, rugged systems including flat panel displays, plus high speed networking and communications products. The company is head-quartered in the U.S. and has design, manufacturing and support offices throughout the world. Whether you're looking for one of our standard products or a fully custom solution, GE Fanuc Embedded Systems has the breadth, experience and 24/7 support to deliver what you need. For more information, visit www.gefanucembedded.com.

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Additional Resources

For more information, please visit the GE Fanuc Embedded Systems web site at:

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